PFP Recovery Update – February 13, 2018

Updated 2:10 p.m. PST

Updates since February 12, 2018 highlighted

The focus at PFP is on the health and safety of the workforce, addressing worker concerns, ensuring PFP remaining facility debris and rubble piles are stable, and mitigating the potential for any additional spread of contamination. CHPRC is not authorized to conduct any demolition work at PFP until DOE has been briefed and approves the recovery plan.

Plant Status

System/Area	Status
PFP Workforce	• No new safety issues.
PRF Area	• Area remains stable since last report.
PFP Property Area	• On Feb. 13, a PFP worker issued a stop work on the use of respirators issued from building 2754W because that building is located inside the newly-expanded radiological buffer area (RBA), as reported in the Feb. 12 update. ○ As a response, PFP issued respirators from another project for use Feb. 13. The PFP is also surveying all of the respirators currently in 2754W to ensure they are free of contamination and will establish a new location from which to issue them.

Radiological Surveys, Sampling and Analysis

- Surface monitoring: metal plates, called "cookie sheets," are placed throughout the work control area, usually near air monitors. The metal plates are checked with detectors, normally twice a day, for contamination. Any contamination detected is expressed in disintegrations per minute, a unit that measures how many radioactive atoms decay in a minute.
- Continuous air monitors (CAMs): stationary monitors are placed in or near the PFP demolition zone and provide real-time information about the level of airborne radioactivity. The monitors are set to alarm, allowing workers to take protective measures if there is an indication of airborne radioactivity. Filters may also be collected from the CAMs for analysis in a laboratory to provide additional information about any airborne radioactivity. Contamination values are expressed as derived air concentrations times hours (DAC-hours).
- Fixed air samplers: stationary monitors are placed around radiological boundaries to provide retrospective, not real-time, data about the presence and type of airborne radioactivity. The monitors are fitted with filters that collected daily for further analysis. Contamination values are expressed as derived air concentrations times hours (DAC-hours).

On-Site and Environmental:

Cookie Sheets (69 total)		
	Feb. 12 Day Shift	Feb. 12 Swing Shift
Number Surveyed	30	69
Number Clean*	30	69
Number Contaminated *(Note location and level)*	0	0

*Clean = direct contamination < 500 dpm/100cm² and removable contamination < 20 dpm/100cm² (or < 100 dpm/100cm² in a posted CA or HCA)

- **Continuous air monitor** Readings (14 total): All CAMs reading less than 1 DAC-hr as of 9:00 a.m., Feb. 13.
- **Fixed air samplers** (24 total): Air filters removed and analyzed with no indication of radioactivity other than radon as of 11:00 p.m., Feb. 13.

Bioassays: Bioassays are used when a person is potentially exposed to contamination to determine whether or not there has been an intake (e.g., inhalation or ingestion) of radioactive material and results include an estimated dose. The table below provides a summary of bioassay results following the spread of contamination in December. The data shows radiological doses to personnel in millirem (mrem) and is current as of Feb. 13 at 4:40 a.m. This information will be updated as more results are received. Individual employees are briefed on their bioassay results as soon as the results are available.

Requested	281
Negative	212
Preliminary Positive*	4
Positive with Initial Dose Estimate Less than 1 mrem: 0 1-10 mrem: 4 10-20 mrem: 1	5
Positive with Verified Dose Assigned Less than 1 mrem: 1 1-10 mrem: 0 10-20 mrem: 0	1

*Preliminary Positive: Initial indication from laboratory of positive result with no dose estimate. Subject to change (to negative) as additional analysis is completed.

- Doses are the expected dose over 50 years.
- DOE requirements for protecting individuals from ionizing radiation set an administrative control level, or dose limit, of 100 mrem/year for non-radiological workers and members of the public visiting DOE sites (DOE Order 458.1). The DOE administrative dose limit for radiological workers is 500 mrem/year.

External:

- **Department of Health Web Page**: The Washington State Department of Health has set up a web page with environmental monitoring information about Hanford.

- **Government Vehicle Radiological Surveys:**
  - On Feb. 1, CHPRC completed requested surveys of four Hanford Fire Department (HFD) government vehicles. No contamination was detected.
  - Surveys of PFP-controlled government vehicles were completed Jan. 23. Decontamination and dispositioning of 27 contaminated vehicles is ongoing. Those vehicles remain in a radiologically-controlled area.

	Total
PFP-Controlled government vehicles surveyed	97
Decontaminated and returned to service	2

Contaminated and awaiting disposition (held as radiologically-controlled vehicles or decontaminated)	27
No contamination found and returned to service	68

- **Personal Vehicle Radiological Surveys**:
  - There have been no new requests for personal vehicle surveys since Feb. 1. Personal vehicle survey summary:
    - Dec. 26: Seven personal vehicles identified as contaminated by close of business Dec. 19 were decontaminated, surveyed and released as of Dec. 26
    - Jan. 26: One of seven original personal vehicles surveyed and released Dec. 26 (and remained on site since that time) was found to be contaminated; vehicle was decontaminated Jan. 28.
    - Jan. 31: One of seven original personal vehicles surveyed and released Dec. 26 (rental car) was resurveyed and found to be free of contamination
    - Feb. 1: Seven Hanford Fire Department personal vehicles surveyed; no contamination was found
- **Home Surveys:**
  - There have been no new requests for home surveys since Feb. 5. Home survey summary:
    - Dec. 20: Seven originally-requested home surveys complete with no contamination found.
    - Feb. 6: Requested survey of PFP employee's home completed with no contamination found.

Expert Panel: Members of the PFP Expert Panel continue to meet. The panel consists of federal, officials with expertise in several scientific and technical disciplines who can consult with industry and academic leaders with similar expertise. The panel will evaluate CHPRC's recovery from the contamination event and its proposed technical approach for safely completing demolition of PFP. The panel will provide observations and recommendations to CHPRC. The Expert Panel's charter and biographies of its members are available at www.Hanford.gov.

Causal Analysis: CHPRC is in the process of completing a root cause evaluation report that will identify the factors that led to the spread of contamination and that will propose corrective actions to reduce the likelihood of recurrence. Input from workers and Jacobs Engineering will be included in the root cause analysis.

Workforce Management:

- The workforce remains committed to the current mission of hazard recognition and control despite the challenging situation.

Communications:

- During the week of Feb. 12, CHPRC leadership will brief Mission Support Alliance employees on recent PFP events during a safety meeting open to all MSA employees. *(Attachment 1 is the presentation used in recent discussions about recent PFP events and recovery actions.)* CHPRC will also host an all-hands meeting for PFP employees this week.